Installation manual

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More information can be found at www.xxter.com

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Welcome

With xxter you can extend your automated home or office in only a few steps and control it with a smartphone or tablet.

This manual is intended for the installation professional and starts with a short explanation of the working and configuration options of xxter. In the following chapters you will be taken through the steps for initial registration, configuration, connecting the device and initialisation.

The explanation of how the visualisation for smartphones and tablets can be created and adapted is included in the user manual. This makes it possible for the end-user to fine tune xxter completely to his or her personal needs.

The installation manual expects you, the installation professional, to have basic knowledge on Ethernet networks and the applied home automation standard (KNX/ETS, enOcean, Artnet DMX, Hue).

We often refer to the end-user. The end-user is the intended person to use xxter after installation. More information on the use of xxter can be found in the user manual.

This manual only describes the basic installation of xxter. For additional options and extensions like cameras, intercom systems, uPnP (audio control), graphs, scripts and many other options, separate manuals are available. Please refer to www.xxter.com for more information.

1. Introduction

With xxter you can easily control an automated home or office with a smartphone or tablet, at home or over the Internet when you are away. Additionally xxter gives you the possibility to connect the different home automation standards to each other and integrate it in one environment.

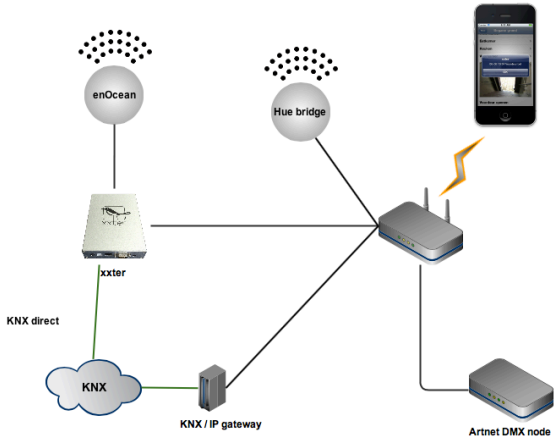

Image 1: xxter overview

The configuration of xxter is stored on xxter's central servers. This configuration is then downloaded on the xxter unit itself and in the app.

In the following chapters, this central configuration is explained in more detail.

2. xxter configuration overview

The xxter configuration is created in four separate parts: devices, projects, profiles and pages.

The device is the xxter unit itself. The unit should be registered for the installation professional as well as the end-user and is the basis for the rest of the configuration.

The project contains the actual technical configuration, wherein the home automation components are defined and additional other features, like for instance cameras. By connecting a project to a device, the project will be enabled for that device.

The profile describes the visualisation for smartphone and tablet. By connecting a profile to a device, the visualisation will become available for that device.

The pages are the different visualisation screens to control a profile. Every profile has one page as start-up page and any number of following pages.

As an installation professional you can configure the project en connect it to a device. Of course it is possible to manage multiple projects and devices for one professional.

As an end-user you can manage the profile and the subsequent pages. It is possible to use multiple devices and profiles next to each other. On the smartphone or tablet you can choose the profile you want to load for the specific device.

This manual describes the configuration of the device and the project. For more information about managing profiles and pages, please refer to the user manual.

In the configuration environment, the installation professional also has access to the section for the end-user.

3. Project configuration

Every project is built from components and every component has a type, a name and group addresses to identify the component.

The type of the component has to correspond with the characteristics of the home-automation component that is used. For an overview and explanation of the different component types, see addendum A.

The name of a component is important for identification by the end-user, so he or she understands which component was intended, for instance “Kitchen table ceiling light”. The end-user can always use another description when including the component in the visualisation.

For the technical identification of the component, group addresses are used:

- The sending group contains the group address to which a telegram should be sent. There is a maximum of one sending group address per component
- The status group(s) contain one or more group addresses to display the status of that component. Often the sending group address is also a status group.
- The value contains the value that should be sent or the value to which xxter should react.

The group addresses are used for all different protocols of home-automation: KNX, DMX , enOcean and Hue. Details about these protocols can be found in the corresponding chapters, later on in this manual.

Apart from these main settings, you can set-up whether xxter should perform a bridge function for a component, between the different protocols, for instance between KNX and enOcean.

For every component you can also select whether the component should be available for the end-user to use as a scenario option or in the planner. Normally all actuators that are used by regular switches in the house should also be available for scenarios and the planner (e.g. lights, curtains, etc).

Projects can be configured through the central webpages of “*My xxter*”, but also by using the configuration tool for installation professionals. For teaching-in enOcean telegrams, the configuration tool is required. You can find the tool on the downloads page for professionals within “*My xxter*”: http://www.xxter.com/myxxter.

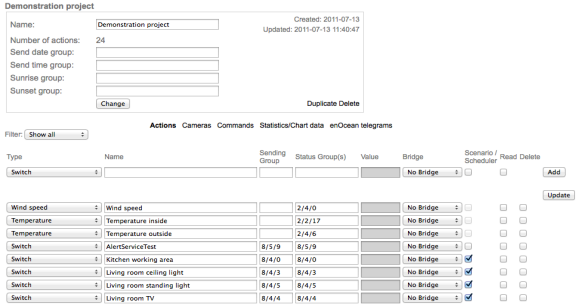

Image 2: project configuration example on “My xxter”

Scenarios

With the use of scenarios the end-user can easily select a set of actions to perform with a single push on a button.

To support scenarios, the installation professional must initially create the scenario groups, to which xxter will react. xxter will listen to the specified group address and value. When a KNX or enOcean switch sends a telegram to one of these addresses, xxter will perform that scenario. Also, scenarios can be used from within the visualisation. It is recommended to create a reasonable set of scenarios, even when they are not (yet) used by switches from the automated home. The end-user can always change the name of a scenario when using it in the visualisation.

How to configure and use scenarios is explained in the user manual.

4. xxter basic installation

Now the basic concepts of xxter are explained, we can start with the installation. The basic installation of xxter consists of the following steps:

1. Registration [chapter 5]
2. Configuring home automation components
    a. KNX [chapter 6]
    b. Artnet DMX (RGB led) [chapter 7]
3. Connecting the device [chapter 8]
4. Set-up [chapter 9]
5. Teaching-in home automation components
    a. enOcean [chapter10]
    b. Phillips Hue [chapter 11]
6. Initialisation [chapter 12]

The configuration of KNX and DMX components can be prepared beforehand (for example from the office), before the xxter unit is physically connected and set-up. To teach in enOcean and Hue components, the specific home automation components as well as the xxter unit have to be installed. In case you want to prepare this from the office, a test setup has to be created, similar to the desired setup at the intended user location.

After the basic installation has been performed, the visualisation from the smartphone or tablet can be configured. The instructions for the visualisation can be found in the user manual.

Apart from the basic installation, xxter also supports cameras, intercom systems, uPnP (for audio control), graphs, scripts and many other features. Separate manuals are available for these features on the website.

5. Registration

Every xxter product has to be registered before use. After registration the installation professional can configure the xxter and the end-user can personalize it. Therefore it is required to register xxter for the professional as well as for the end-user.

For the registration of xxter, please follow the registration help on:
http://www.xxter.com/register

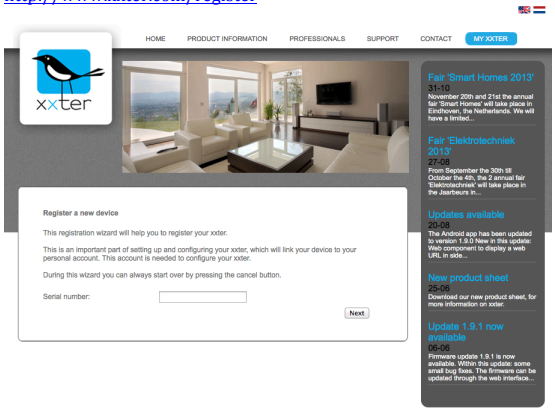
HOME
PRODUCT INFORMATION
PROFESSIONALS
SUPPORT
CONTACT
MY XXTER
xxter
Register a new device
This registration wizard will help you to register your xxter.
This is an important part of setting up and configuring your xxter, which will link your device to your personal account. This account is needed to configure your xxter.
During this wizard you can always start over by pressing the cancel button.
Serial number:
Next
Fair 'Smart Homes 2013'
November 20th and 21st the annual fair 'Smart Homes' will take place in Eindhoven, the Netherlands. We will have a limited...
Fair 'Elektrotechniek 2013'
From September the 30th till October the 4th, the 2 annual fair 'Elektrotechniek' will take place in the Jaarbeurs in...
Updates available
The Android app has been updated to version 1.0.0 New in this update: Web component to display a web URL in side...
New product sheet
Download our new product sheet, for more information on xxter.
Update 1.9.1 now available
Firmware update 1.9.1 is now available. Within this update: some small bug fixes. The firmware can be updated through the web interface...

Image 3: Registration help

Please remember the usernames and passwords well, because they are needed for the rest of the installation. The end-user information can be written down on the back page of the user manual.

The serial number of the device can be found on the back page of the user manual, on the device itself and on the packaging.

6. Configuring KNX components

For the configuration of a KNX installation in xxter, the KNX group addresses will have to be transferred to xxter as components in the project. The easiest way to do this, is by exporting the KNX configuration in ETS as an OPC extraction and then import it in the xxter configuration tool. Within the tool you can then drag and drop the relevant components from the ETS configuration to the xxter configuration. More information on the configuration tool can be found in the configuration tool manual on the website.

In case you are using an xxter that supports KNX direct (HK01, HKE01), you can program ETS directly through the xxter device, see chapter 16.

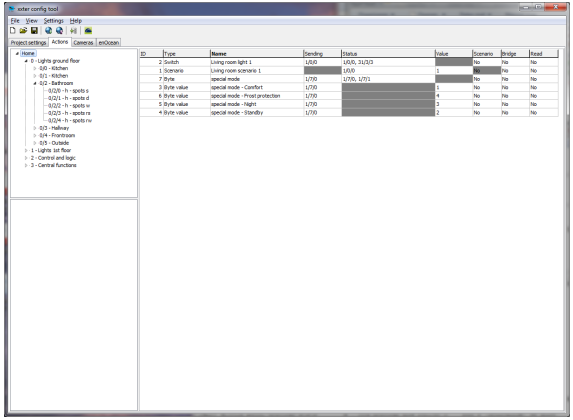

Image 4: xxter configuration tool example

To configure scenarios, you can manually choose one or multiple free group addresses. These need to be 1-byte (0-255) group addresses with a value between 0 and 255. When a certain value is sent to the specified group by for example a KNX switch, xxter will execute the specified scenario.

7. Configuring Artnet components

To configure Artnet DMX equipment, for instance to control RGB-led lighting, the Artnet DMX identification of the specific components must be transferred to the project. Every DMX address will usually have to be included as the sending group as well as the status group.

Arnet DMX only supports byte values and can be used with switches, dimmers, sending byte values and RGB-led lighting. When a switch is used in combination with a DMX address, that address will be set to 100% when an “on” command is given.

A DMX address consists of a universe and an address. The universe can be between 0 and 31 and the address between 0 and 511. In the xxter configuration DMX addresses always contain the prefix “DMX:”, followed by the universe, a “/” and then the address.

An example of a DMX address is: DMX:0/12
With which we intend address 12 of universe 0.

8. Connecting the device

The steps to connect the xxter device depends on the model that is used. For all models the UTP cable has to be connected to the (internal) network. xxter has to be able to connect to the Internet, to download the configuration and for future firmware updates.

KNX direct
In case you are using a xxter model with a direct KNX-bus connection (HK01 of HKE01), then connect the bus cable to pin 2 (KNX min/black) and pin 3 (KNX plus/red), see image 5. First connect xxter to the KNX-bus and then connect xxter's power adaptor to the power socket.

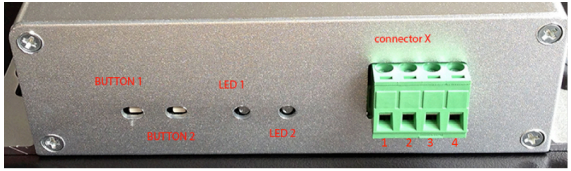

Image 5: xxter rear panel

KNX connection over IP
When using KNX over a KNXnet/IP module, please make sure the xxter unit and the KNXnet/IP module are both connected to the same internal network.

Artnet DMX
For the use of DMX components, an ArtNet->DMX node is required. This node must also be connected to the same internal network as the xxter unit. A list of ArtNet->DMX nodes that are tested with xxter can be found on the website.

Philips Hue
When using Philips Hue, make sure that the xxter unit and the Hue network module (bridge) are both connected to the same internal network.

enOcean
In case you are using a xxter model with enOcean support (HE01, HCE01 of HKE01), then the enOcean antenna has to be connected to the serial port (RS232) on the front side of the device (see Image 6).

1) Make sure the power adaptor of xxter is not connected.
2) Connect the serial connector of the ANE01 to the serial port (RS232) of the xxter unit.
3) Connect the electrical splitter cable to the xxter unit.
4) Connect the power adaptor to the electrical splitter cable.

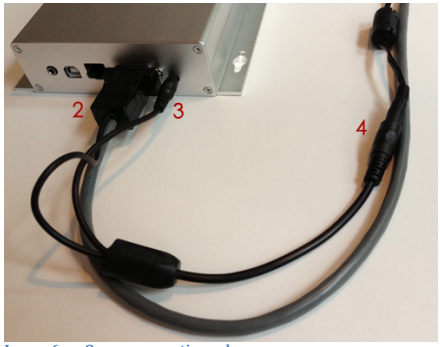

Image 6: enOcean connection schema

The enOcean ANE01 antenna is equipped with a repeater function.

The ANE01 repeater has three different settings:
1) No repetition (standard): both dip-switches to OFF (numbered side)
2) Repeat only original telegrams (level 1): set only dip-switch 1 to ON
3) Repeat both original and one time repeated telegrams: set both dip-switches to ON

Before a new repeater setting is active, it is required to shortly disconnect the ANE01 from the power source.

9. Set-up

The following settings need to take place on the xxter unit itself. Access the device on the local network with your web browser using the IP address the xxter device has received.

http://IP-adres

Normally xxter will automatically receive an IP-address through DHCP. You can look up the IP-address that was given out on the DHCP–server or router, after the xxter device has fully started. You can also access the IP-search function in the configuration tool, to find the xxter device.

In case xxter could not reach a DHCP server, it will use the following default settings:

IP-address: 192.168.0.150
Netmask: 255.255.255.0

To connect to xxter, your computer has to use a similar IP-address, for instance 192.168.0.10.

To continue the set-up, follow the xxter configuration help:

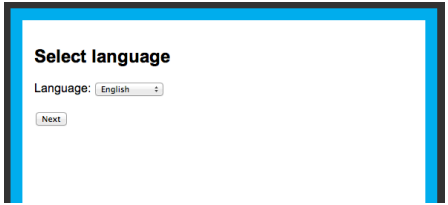

Image 7: configuration help

You can write down the definitive IP-address of the xxter device on the back page of the user manual.

After the basic settings are completed, the protocol specific settings need to be set. On the xxter unit, open the *Settings – basic* page.

KNX-direct
Under the "*KNX settings*" the KNX protocol should be enabled, with the connection method set to "Direct". Verify whether the KNX physical address is not used on the KNX bus by another component. We advice you to reserve this address in KNX as a dummy component, to prevent the address to be used by another device in the future.

KNX connection over IP
Under the "*KNX settings*" the KNX protocol should be enabled. In case you are using the KNXnet tunnel protocol, enter the IP address of the KNX/IP module. In case you are using the KNXnet routing protocol, set this feature to "on" and verify the standard Multicast IP address.

enOcean
Under the "*enOcean settings*" the enOcean protocol should be enabled.

Artnet DMX
Under the "*ArtNet settings*" enter the IP-address of the ArtNet receiver. To guarantee the connection between Artnet DMX and xxter after (network) disconnections, xxter can repeat the status of the DMX components in a specified interval. Turn on this feature if desired.

Philips Hue
Under the "*Hue settings*" enter the IP-address of the Hue bridge. After the settings are applied, push the button on the Hue bridge itself and subsequently on the button "*Link to Hue bridge*".

When you open the *Status* page, you can verify whether the KNX, enOcean and/or Hue are connected correctly.

10. Teaching-in enOcean components

To teach in enOcean components, the configuration tool is used. You can find the tool on the downloads page on the professional section of "*My xxter*": http://www.xxter.com/myxxter.

In the configuration tool, open a project, download a project from the server or create a new project. Enter the IP address of the xxter device in the tool's settings and connect to the device using the right-most button in the toolbar (the enOcean symbol). Now the configuration tool can receive enOcean teaching telegrams.

The configuration tool will automatically add all received "teach-in" and switch telegrams to the project on the fourth tab of the tool

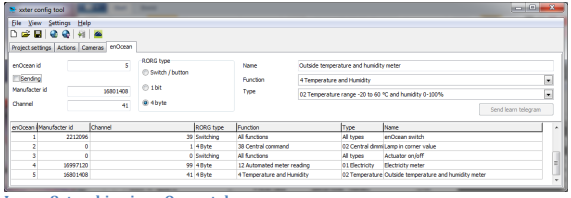

Image 8: teaching in enOcean telegrams

Of course you can also add sending enOcean telegrams in the configuration tool.

For a detailed explanation of the different types of enOcean telegrams and a complete overview of all steps to configure enOcean, please refer to the separate enOcean manual on the website. Here you can also find an overview of all enOcean components that are supported by xxter.

11. Setting up Hue components

Before using Hue components, make sure that all Hue lights are correctly configured within the Hue system, as described in the Hue manual(s). By using the Phillips® Hue app, you can see which Hue lights are configured, and in which order.

On "*My xxter*" or in the xxter configuration tool you can then add the different Hue lights. Always enter a Hue light in the sending group as well as the status group.

A Hue light is always defined in the following format:

"HUE:" followed by the lamp number, a "/" and the desired command. For instance "HUE:1/S" for switching lamp 1 on/off.

The following commands are supported:

Switch	S	Switching on/off
RGB lighting	R	Red
RGB lighting	G	Green
RGB lighting	B	Blue
Dimmer	hue	Hue (colour)
Dimmer	sat	Saturation
Dimmer	bri	Brightness

To set a certain colour of a Hue light the "RGB lighting" component can be used, or two separate dimmers for setting the Hue and Saturation.

12. Initialization

Now the installation and configuration is complete, it can be loaded onto the xxter device. Access the device on the local network with your web browser using the IP address of the xxter device and log in. Then open the *Settings – system* page and in the C*onfiguration* section press the "*Load*" button to load the personal configuration onto the device.

When the configuration is successfully loaded, the technical installation is completed. Now, using the user manual, the visualisation for the smartphone or tablet can be created and the xxter app installed and set up to connect to the xxter device.

We recommend that the installation professional always creates an initial visualisation for, or together with, the end-user.

13. Using xxter over the Internet

When the end-user wants to use xxter not only from within the home or office, but also over the Internet, the router, firewall or modem has to be configured to allow this.

The following port has to be forwarded to the internal IP address of the xxter device ("port forwarding"):

TCP: 2199

Please refer to the manual of the router, firewall or modem of the end-user, how this should be done.

It is also possible to configure the xxter device to work on a different port number. On the webpage of the xxter device open the *Settings – basic* page and change the "*Secure application port*". Remember that the alternate port number should also be explicitly added when configuring the xxter app on a smartphone or tablet.

14. Updating firmware

Regularly new versions of the xxter firmware will be released. These releases can add new features, but can also contain bug fixes or improvements. On the xxter website the latest version of the firmware is listed.

The xxter device itself can verify whether new firmware is available. Access the device on the local network with your web browser using the IP address of the xxter device and log in. Then open the *Settings – system* page and in the *Firmware* section press the "*Check*" button to check for firmware updates. In case a new version is available, you will be prompted to update the firmware.

By selecting "*update firmware*", the device will download and install the new firmware. This can take some time. After the firmware is successfully updated, the xxter device needs to be restarted. This can be done by clicking "*Reboot*" to reboot the device.

Important: never turn off the xxter device while it is updating the firmware!

After updating the firmware, we always advise to reload the configuration, see chapter 12.

It can be required to update the firmware multiple times in a row, before the xxter device is updated to the latest version.

15. Reset options and status LEDs

In case of any problems, the xxter device can be reset in several different ways, see also image 9:

BUT1	Hold during boot	Reset to factory defaults
BUT1	Press shortly	Full restart
BUT1	Press long (longer then 3 sec.)	Reset to factory defaults
BUT2	Press shortly	Reset application (soft restart)

When the xxter device is connected to power, the system status can be seen using the LED indicators:

LED1	green slow flashing	Currently booting or shutting down
LED1	green continuous	Application started and ready for use
LED2	green slow flashing	Normal operation - OK
LED2	yellow slow flashing	No connection to KNX or enOcean
LED2	red quick flashing	LAN problem, no network
LED2	red / green intermittent	No Internet connection, only LAN connection*

*) the Internet connection is only verified during boot and when the "Check Internet connection" button is pressed on the status page of the xxter device.

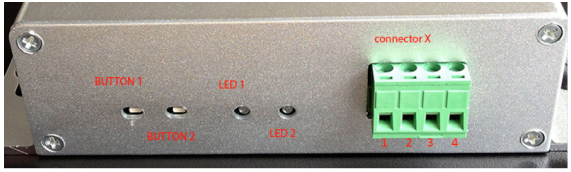

Image 9: xxter rear panel

16. Programming KNX through xxter

In case you are using an xxter device that supports KNX direct (HK01, HKE01), it is possible to program with ETS through the IP address of the xxter device, using the KNXnet/IP tunnel protocol. This access is normally disabled and must be activated by the user explicitly. Access can be granted for a period of 1 hour, 4 hours, 8 hours or indefinitely.

After the device is connected and set up, this option can be found on the status page of the xxter device under *KNX tunnel input*. When the xxter app is installed and set up (see user manual), it is also possible to grant access through the *configuration* menu on the *settings* page with the option "Allow access to KNX bus". This way the end-user can grant you as the installation professional temporary access for maintenance. The app will enable access for a default period of 8 hours.

In case you want to have access to the xxter device for programming from a remote location (your office), you will need to extend access to xxter over the internet (see chapter 13) with "port forwarding" for UDP on port 3671. With ETS you can then connect to the dynamic DNS address of the xxter device. You can find this address as "IP or host (external)" on the devices page of "*My xxter*".

17. Service and support

Answers to frequently asked questions can be found on:

http://www.xxter.com/faq

Additional support can be found on:

http://www.xxter.com/support

In case you are unable to resolve the issue here, you can contact us on support@xxter.com. Please always include the serial number of the xxter device it concerns.

Addendum A (component types)

In this addendum we supply a short explanation for the project configuration of the most used types of components for home automation.

A switch refers to a relay or switch actor and can only be turned on or off.

A dimmer refers to a dimming actor and can be set to a scale of 0 to 100%.

RGB lighting is a combination of three connected dimmer components for red, green and blue. Together they set one RGB lamp to the desired colour.

Bit/Byte values can be used to send or receive values from the home automation installation. The type of component defines what kind of bit or byte value should be used.

Sensor values like temperature, wind speed, etc. can be used to read information from the home automation installation, but can also be used to send a value, for instance to set a thermostat temperature.

Technical specifications

Size (lxwxh): 180x152x38mm
Weight: 0,5 kg
Voltage: 5VDC
Power consumption: 300mA (avg.)
Cooling: passive

Accessories:
- Adapter 5VDC
- UTP cable
- enOcean antenna (only for models HE01, HCE01 en HKE01)
- Installation manual EN
- User manual EN

The other specifications can be found on the back page of the user manual.